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2838

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Atty. Docket

PAK CHUNG TANG

PHUS 010061

Serial No.: 09/933,555

Group Art Unit: ~~2638~~ 2838

Filed: August 20, 2001

Examiner: L.W. Luk

Title: OVER-CURRENT PROTECTION CIRCUIT

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AUG 13 2003

Technology Center 2800

Sir:

Enclosed is an amendment in the above-identified application.

[X] No additional fee is required.

[] The fee has been calculated as shown below.

CLAIMS AS AMENDED					Additional Fee
	Claims remaining after amendment	Highest number previously paid for	Number extra	Rate	
Total Claims	8 Minus 20 ¹ =		X \$18 =		\$
Independent Claims	1 Minus 3 ² =		X \$84 =		\$
Multiple Dependent Claims, if any. If not previously paid, \$280.					\$
Total Additional fee for this amendment =					\$


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¹If less than 20, enter 20. ²If less than 3, enter 3.

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Edward W. Goodman, Reg. 28,613
914-333-9611

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on August 8, 2003

Burnett James



#6
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8/06/03
Response

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

PAK CHONG TANG

SERIAL NO.: 09/933,555

FILED: August 20, 2001

OVER-CURRENT PROTECTION CIRCUIT

Commissioner for Patents
P.O. Box 1450
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Atty. Dock

PHUS 010061

GROUP ART UNIT: 2838

EXAMINER: L.W. Luk

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Sir:

RESPONSE UNDER 37 C.F.R. 1.111

This is in response to the Office Action mailed June 4, 2003, in which the Examiner rejected claim 1 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 4,599,643 to Harlan; and claims 2 and 5 under 35 U.S.C. 103(a) as being unpatentable over Harlan in combination with U.S. Patent 5,043,639 to Gurley et al. Applicant acknowledges the allowability of claims 3, 4 and 6-8.

Applicant traverses the above rejections and offers the following explanation.

The Harlan patent discloses an apparatus responsive to plural color video signals for amplitude limiting the video signals to assist beam current limiting, in which, as described at col. 4, line 18 to col. 5, line 2, a beam current limiter network 30 detects the voltage at a node B from which a re-supply current I_R

is supplied to a high voltage supply 22 for generating the high voltage to the kinescope. Accordingly, the voltage at the node B, resulting from a current I_c is used to forward bias a transistor 36 in a control signal sequencing circuit 35. If the current I_R increases above a particular level, the base-collector junction of transistor 36 becomes reverse biased, and the voltage at B decreases with increasing re-supply current I_R . Sequencing circuit 35, in turn, generates variable beam limiting control voltages V_P , which limits excessive beam currents by reducing the amplitudes of the luminance and chrominance signals via gain control inputs T_2 and T_3 of luminance processor 14 and chrominance processor 12, and V_B , which reduces the DC level of the video signal of the luminance processor 14 via control input T_1 . As described at col. 3, lines 3-39, an additional measure of beam current control is utilized by measuring the magnitudes of the color signals r , g , b between the matrix 17 and the driver 18, and by additionally adjusting, accordingly, the control signals at the gain control inputs T_2 and T_3 .

The subject invention relates to an over-current protection circuit for preventing damage to portions of a television receiver due to excessive beam current. To that end, the subject invention includes means for directly detecting the beam current; means for comparing the detected beam current with a predefined threshold level, and means for generating a control

signal for turning of a high voltage generating circuit having a control input for receiving the control signal.

Applicant submits that Harlan does not directly measure the beam current. Rather, the voltage at a node from which emanates a current proportional to the beam current, is used in the limiting of the beam current. In addition, Harlan does not generate a control signal, coupled to a control input of the high voltage generating circuit, for turning off the high voltage generating circuit in dependence on the comparing of the detected beam current to a threshold level. In fact, Harlan does not show or suggest any action relating to the high voltage supply 22, nor the existence of a control input thereon. Further, Harlan does not show or suggest turning off the high voltage supply upon the beam current exceeding the threshold. Rather, Harlan discloses means for reducing the video signals which would indirectly reduce the beam current.

The Gurley et al. patent discloses a video display apparatus with kinescope spot burn protection circuit in which a driver bias control circuit 50 provides a cut-off bias for output transistor 22 (col. 4, lines 20-42).


Applicant submits, however, that the circuit 50 does not control the high voltage supply which, in Gurley et al., would be the grid bias control 60. As such, Gurley et al. neither shows nor suggests means for latching said high voltage generating circuit in an off state.

Furthermore, Applicant submits that Gurley et al. does not supply that which is missing from Harlan, i.e., directly measuring the beam current; generating a control signal, coupled to a control input of the high voltage generating circuit, for turning off the high voltage generating circuit in dependence on the comparing of the detected beam current to a threshold level; and turning off the high voltage supply upon the beam current exceeding the threshold.

In view of the above, Applicant believes that the subject invention, as claimed, is neither anticipated nor rendered obvious by the prior art, either individually or collectively, and as such, is patentable thereover.

Applicant believes that this application, containing claims 1-8, is now in condition for allowance and such action is respectfully requested.

Respectfully submitted,

by 
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On August 8, 2003
By Burnett James